ABSTRACT OF THE DISCLOSURE

A method and apparatus to ensure that protocol data units received out of order do not have to be buffered by a reassembly buffer in the performance path is presented. When an application or device requests to transfer data with another application or device, a framing protocol sends one or more complete protocol data units preceded by a framing header that is aligned with the transport header. The framing header contains information that allows the receiving application or device to determine where the protocol data unit should be placed so that successive protocol data units can be recovered when a previous protocol data unit has been received out of order.